A KEY TO THE GENUS ACANTHOGNATHUS MAYR, WITH THE DESCRIPTION OF A NEW SPECIES (Hymenoptera:Formicidae)

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The genus *Acanthognathus* was described by Mayr in 1887 to include *ocellatus*, a new species collected in the province of Santa Catharina, Brazil. This remained the only known form until 1922 when Mann described *lentus* from specimens found at Progresso, Honduras. A third species, described below, was collected in 1943 on Barro Colorado Island, Canal Zone, by James Zetek. In addition to the previously mentioned locality, *ocellatus* has been reported from Para and the State of Rio, Brazil.

Very little is known about the biology of these ants. Collections have shown, however, that the colonies are small and that they are found in the soil or in rotting wood. No information is available on feeding habits, but the species of *Acanthognathus* are probably predaceous like some of their close relatives. Moeller observed workers of *ocellatus* transporting larvae by means of the accessory spines at the bases of their mandibles. He stated that the mandibles are held as widely open as possible when this action is taking place.

Important references have been cited for each species to aid the work of determination.

The author has examined a cotype of *lentus*, but he has not seen any specimens of *ocellatus*.

Key to Species

(For identification of workers)

1. Antennal scape unusually slender, with attenuated base; exceeding posterior border of head 2

   Antennal scape not unusually slender or with attenuated base; not attaining posterior border of head. (Inner border of mandible with a number of minute denticulae near the apex. Dorsal surface of thorax almost entirely smooth and shining.) ..... *brevicornis*, new species

2. Head so densely sculptured as to give the surface a subopaque appearance. Enlargement toward apex of scape noticeably constricted near the funiculus. Emargination at posterior border of head angular ..... *lentus* Mann

   Head not as densely sculptured as with *lentus*. Enlargement toward apex of scape not noticeably constricted near the funiculus. Emargination at posterior border of head broadly rounded ..... *ocellatus* Mayr

Acanthognathus brevicornis, new species

Worker.—Length (including mandibles) 3 mm.

Head subcordate, the posterior border strongly and angularly emarginate. Antenna 11-segmented; scape short (approximately three-fourths the length of the head measured from the anterior border of the clypeus to the posterior corner), not attaining the posterior border at any point, slender, curved and enlarged toward the apex but narrowing again before its junction with the funiculus; first, ninth, and tenth funicular segments long, the second through the eighth short and somewhat indistinct. Eye placed approximately at the middle of the side of the head, oval, well developed, with about 7 to 8 facets in its greatest diameter. Clypeus longer than broad, subtruncate anteriorly, with the posterior border extending between the frontal carinae to the approximate limits of the latter. Frontal carinae short, each forming a prominent lobe which conceals the insertion of the antenna. Mandibles 0.86 mm. long (slightly shorter than the head), elongate, slender, subparallel, porrect, each with 3 curved, hooklike apical teeth, the median of which is the longest. Inner border of mandible with a slight enlargement near the middle, and a number of very minute denticulae between the enlargement and the apex. Ventral surface of each mandible near the base with a slender, curved spine which is apically bidentate and is directed somewhat mesoposteriorly. Humerus of prothorax with a prominent, tuberclelike spine. Promesonotal suture more or less indistinct. Mesoepinotal impression pronounced. Epinotum higher than long and bearing a pair of well-developed, acutely tipped spines. Petiole strongly pedunculate. Petiole and postpetiole rather nodiform, and without spongiform processes such as occur in *Strumigenys.*

Head with a shining appearance due to the nature of the sculpturing which consists of rather sparse, subcircular depressions, each bearing a central elevation from which arises a short, curved, bluntly tipped or claviform hair. In the posterior part of the head the punctures are either absent or else separated by a space more than their greatest diameter. All the interspaces are smooth and shining. Thorax so weakly sculptured that it is also shining.

Body dark reddish brown with slightly lighter appendages.

Dealated female.—Length (including mandibles) 3.85 mm.

Besides the usual caste differences the female differs from the worker in its larger size, more convex and larger eyes (with 12–13 facets in their greatest diameter) and coarser sculpturing on the head. The punctures on the head are not dense enough to give the head a subopaque appearance.

Type locality.—Canal Zone: Barro Colorado Island (James Zetek).

Described from a holotype worker and an allotype female. Two paratype females do not differ appreciably from the allotype. All of these are deposited in the United States National Museum under U. S. N. M. No. 56862.

The ants were collected sometime during the period from June to October 1943, and bear the label, Zetek No. 5105. Nothing is known concerning their biology.

The length and shape of the antennal scape, and the nature of the sculpturing of the head and thorax readily distinguish the worker of *brevicornis* from those of the other species.

Acanthognathus lentus Mann

Acanthognathus lentus Mann, 1922, U. S. Natl. Mus. Proc. 61: 34–35, *worker*, *female*, fig. 16, head of worker.

Known only from the type series from Honduras.

Acanthognathus ocellatus Mayr

Acanthognathus ocellatus Mayr, 1887, Zool.-Bot. Gesell. Wien, Verhandl. 37: 579, *worker;* Mann, 1916, Harvard Univ. Mus. Compar. Zool. Bul. 60: 452, *female*, *worker*, pl. 5, fig. 38, *female;* Emery, 1922, Genera Insect. Fasc. 174 c: 317–318; Santschi, 1922, Soc. Vaud. des Sci. Nat. Bul. 54: 353–354, *worker*, pl. 1, fig. a, head of worker; Borgmeier, 1927, Arch. Mus. Nac., Rio de Janeiro 29: 120.

Apparently widely distributed in Brazil.

SUGGESTIONS FOR GROUPING THE FAMILIES OF ACALYPTERATE CYCLORRHAPHOUS DIPTERA ON THE BASIS OF THE MALE TERMINALIA

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The following *purely tentative* arrangement of 34 of the principal families of Acalypteratae of phylogenetic importance (which are here grouped on the basis of the modifications of the male terminalia) is presented in the hope that other students of the Acalypteratae, who have different views concerning their arrangement, may be induced to contribute to the discussion of the proper grouping of the Acalypteratae according to their natural affinities.

A study of the modifications of the male terminalia (which include the parts of at least six segments—i.e. segments 6–11, inclusive—comprising a fairly large portion of the insect's body) would indicate that the more important families of the Acalypteratae, used as typical examples, may be distributed in two main divisions, as follows: